

Commonwealth of Kentucky
Division for Air Quality
RESPONSE TO COMMENTS

ON THE TITLE V/ACID RAIN/NOX BUDGET PERMIT V-04-048 (DRAFT PERMIT)
RIVERSIDE GENERATING COMPANY, L.L.C.
CATLETTSBURG, KY
DECEMBER 6, 2004
RALPH E. GOSNEY, REVIEWER
PLANT I.D. # 21-127-00040
AGENCY INTEREST # 4392

TITLE V PERMIT V-04-048 BACKGROUND:

An application for a renewal to the Title V Permit, V-99-051 Revision III, for the Riverside Generating Company, L.L.C. was received on August 4, 2004. A Title IV Acid Rain Permit application was received on June 25, 2004 and a nitrogen oxides (NO_x) Budget Permit application was received on November 25, 2002.

The facility is classified as a Title V major source of air pollution based on the potential to emit more than 100 tons per year (tpy) of carbon monoxide (CO) and nitrogen oxides (NO_x).

SOURCE DESCRIPTION:

The source produces electricity from the combustion of natural gas. The source is operated primarily in summer months when loads are at the highest levels. There are 5 natural gas turbines for the generation of electricity, Emission Units 01 – 05. There are two natural gas-fired indirect heaters, Emission Units 06 and 07 for heating fuel fed to the turbines. There are no significant modifications to the facility for the Title V renewal. The facility will keep the source-wide emissions caps, in order to preclude 401 KAR 51:017, of 245 tpy for CO and NO_x, during any consecutive 12-month period.

PUBLIC AND U.S. EPA REVIEW:

The air quality permit notice for the Draft Title V Operating Permit for Riverside Generating Company, L.L.C., was placed in *The Daily Independent* in Ashland, Kentucky on October 30, 2004. Comments on the Draft Title V Operating Permit were received on November 23, 2004 from Barbara Irwin, Senior Environmental Professional for Dynegy, Inc. Responses to these comments are included in Attachment A.

ATTACHMENT A

Response to Comments on Draft Permit V-04-048

An application for a renewal of the Title V Permit, V-97-013, for the Riverside Generating Company, LLC was received on November 23, 2004. The submittal included Title IV Acid Rain Permit renewal forms and a nitrogen oxides (NO_x) Budget Permit application. A draft Title V/Acid Rain/NO_x Budget Permit V-04-048 was prepared by the Division and the air quality permit notice was placed in *The Daily Independent* in Ashland, Kentucky on October 30, 2004.

Comments and Response

The following comments on the draft Title V/Acid Rain/NO_x Budget Permit V-04-048 were received on November 23, 2004 from Barbara Irwin, Senior Environmental Professional for Dynegy, Inc. Responses by the Kentucky Division for Air Quality are included after each comment.

1. The Permit Application Summary Form

- Emissions Summary: On page 2 of 2, the table shows tons per year (tpy) for the Controlled Total (tpy) and Title V Potential (tpy) totals for PM₁₀, PT, SO₂, VOC, HCHO, and Total HAPs based on operating each unit 8,760 hours per year. The facility wide NO_x and CO emissions totals (limited to 245 tons per year) are based on 4,580 hours per year, for all five units. Therefore, to represent all emissions consistently, we request all tpy emission totals, presented in this permit, be based on 4,580 operating hours.

Pollutant	Controlled Total (tpy)	Title V Potential (tpy)
CO	245	245
Nox	245	245
PM ₁₀	19.0	19.0
PT	19.0	19.0
SO ₂	7.1	7.1
VOC	31.2	31.2
HCHO	2.3	2.3
Total HAPs	3.7	3.7

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See Attachment 1, copy of page 4 of 4 - Emissions Estimates Table 4 from permit application showing Maximum Annual Emission Rates based on 4,580 operating hours.

Division's response: The operating limit for the turbines in the draft permit was a limit of 4,580 hours per unit. There was no operating limit for the heaters.

Division's response (Continued): The permit has been revised to include the following language for the turbines "the emission units shall have the following limit: the combined total of the 5 combustion turbines Maximum Total Annual (12-month rolling total) Operating Time \leq 4580 hr." The permit has also been revised to include the following language for the heaters, "the Maximum Total Annual (12-month rolling total) Operating Time \leq 4580 hr for each heater."

The potential to emit totals have been recalculated, based on the total operating time of 4580 hours for the 5 turbines combined and 4580 hours for each heater. The Permit Application Summary Form, Statement of Basis, and permit have been modified accordingly.

2. The Permit Application Summary Form

- Source Description: On page 2 of 2, the second paragraph states the facility is classified as a Title V major source on the potential to emit more than 100 tpy of PM₁₀ and VOC and more than 10 tpy of formaldehyde. Based on the request in the previous paragraph, and limiting the operation of the units to 4580 hours per year, please remove the reference of PM₁₀, VOC and formaldehyde as Title V major source pollutants, as these emission totals will not exceed 100 tpy or 10 tpy respectfully.

Division's response: The permit application summary form has been revised, as requested. Please refer to the response to 1.

3. The Permit Statement of Basis

- Source Description: On page 1 of 5, the second paragraph again states the facility is classified as a Title V major source for PM₁₀, VOC and formaldehyde. As discussed in the two previous paragraphs, please remove the reference to PM₁₀, VOC and formaldehyde as major source pollutants, as these emission totals will not exceed 100 tpy for PM₁₀ & VOC, or 10 tpy formaldehyde.

Division's response: The permit statement of basis has been revised, as requested. Please refer to the response to 1.

4. The Permit Statement of Basis

- Comments: On page 3 of 5, the first paragraph states that due to the lower sulfur limit of 1.0 grains/100 dscf imposed for Riverside, that Riverside is now required to meet the minimum requirements of 40 CFR 60, Subpart GG and monitor the sulfur content of natural gas once per month, when a unit is operating.

Riverside was previously issued an approved Custom Fuel Monitoring Schedule (CFMS) and has been complying with such CFMS (e.g. once per month for six months, then once per quarter for six quarters, and now twice per year during 1st and 3rd quarters). At no time since commencing operation has Riverside exceeded the sulfur limit of 1.0 grains/100 dscf. In light of our previous compliance we do not feel it prudent to impose a more restrictive sulfur-sampling requirement. In addition, the final rule amendments to

40 CFR Part 60, Subpart GG was not intended to impose new requirements for turbines constructed before July 8, 2004. Section 60.334(h)(4) of the final rule states that “For any turbine constructed.....for which a custom fuel monitoring schedule has previously been approved, may, continue monitoring on this schedule. See Table in Attachment 2 for summary of sulfur analysis data. Riverside requests to continue monitoring sulfur in natural gas as per their previously approved CFMS.

Division’s response: The permit and permit statement of basis have been revised, as requested. The permit now contains the following language, “Pursuant to 40 CFR 60.334(h)(4), for which a custom fuel monitoring schedule has been approved, the owner or operator may continue monitoring on this schedule. Therefore, according to the current custom monitoring schedule, the sulfur content of the fuel shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.”

5. The Permit Statement of Basis

- Comments: On page 4 of 5, the first full paragraph references limiting emission of particulate matter not to exceed 0.15 lb/mmBTU actual heat input and SO₂ not to exceed 0.33 lb/mmBTU actual heat input. To be consistent with the actual draft permit language (page 24 of 26 in the Draft Title V Operating Permit), this language should include that these limits are based on a 3-hour average.

Division’s response: Comment noted, and the statement of basis has been amended, as requested.

6. The Draft Air Quality Permit

- ID COMB7001, Page ii of iv shows the incorrect Date Constructed for Heater-201 as May 2001. The correct date should be May 2002 for Heater- 201.

Division’s response: Comment noted, and the permit amended, as requested.

7. The Draft Air Quality Permit

- ID GACT3 – COMB7001, on Page iii of iv, also shows the incorrect Date Constructed for Heater-201 as May 2001. The correct date should be changed to May 2002.

Division’s response: Comment noted, and the permit amended, as requested.

8. The Draft Air Quality Permit

- Condition Nos. L-1 and L-2, on Page 1 of 26, requires records of CO and NO_x emissions from the Natural Gas Heaters (06 & 07) and operating hours of the emergency generator and fire pump be reported quarterly to KDEP’s Ashland office. Pursuant to directions Riverside was previously given by the Ashland office, Riverside provides these specific records in a semi-annual report and would like to continue this practice instead of submitting this information quarterly.

Division’s response: Comment noted, and the permit amended, as requested.

9. The Draft Air Quality Permit

- Condition No. S-1, on Page 2 of 26 states that “Data from all continuous emission and opacity monitors shall be reported.....”. Riverside does not have opacity monitors and requests the removal of the reference to any opacity monitors.

Division’s response: Condition No. S-1 is general permit language for semi-annual reports. If the facility does not have opacity monitors, then there will not be any opacity monitor data to report.

10. The Draft Air Quality Permit

- Condition T-13 – D.5.ii, on Page 6 of 26 states “When emissions exceed..... notification shall be made as promptly as possible by telephone (or other electronic media).....”. We are requesting the “promptly as possible” notification be defined and added as “within 24 hrs of the exceedance”. This would allow Riverside time to gather all the required information (e.g. nature, cause, corrective action, emissions) necessary for making the notification.

Division’s response: Condition No. T-13 is general permit language for monitoring, record keeping, and reporting requirements. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards notification shall be made as promptly as possible by telephone or other electronic media. If additional information is gathered after the incident, that information can be added to the written notice, if a written notice is requested.

11. The Draft Air Quality Permit

- Condition No. L-1 on Page 16 of 26 states “The start-up and shut-down emission calculation should be based on the vendor recommended emission rate.” Riverside has actually tested CO emissions during start-up and shut-down and developed within their CEMS computer an emissions curve that reports a CO lb emission value for each start-up and shut-down event. Therefore, CO emissions are based on actual emission test data. Please replace the reference of vendor data with lb per SU/SD emission test data.

Division’s response: Comment noted. The reference to vendor data has been replaced with “The start-up and shut-down emission calculation should be based on the CEMS computer emission curve developed from the facility start-up and shut-down emission test data from prior facility testing.”

12. The Draft Air Quality Permit

- Condition No. L-3 on Page 17 of 26 states “The start-up and shut-down emission

calculation should be based on the vendor recommended emission rate.” All five combustion turbine units at Riverside are equipped with a CEMS NO_x analyzer that monitors and records NO_x emissions from the point of start-up ignition to flame-out at the end of shut-down. Therefore, recorded emissions during start-up and shut-down are actual emissions data. Please replace the reference of vendor data with actual CEMS monitored and recorded NO_x data.

Division’s response: Comment noted. The reference to vendor data has been replaced with “The start-up and shut-down emission calculation should be based on the actual CEMS recorded NO_x data.”

13. The Draft Air Quality Permit

- Condition No. T-9 on Page 22 of 26 states “....the frequency for monitoring for sulfur content of the fuel shall be once per month, if the unit is in operation during that month”. As stated above, Riverside was previously issued an approved CFMS and has been complying with such CFMS since 2001. At no time since commencing operation has Riverside exceeded the sulfur limit of 1.0 grains/100 dscf. In light of our previous compliance we do not feel it prudent to impose a more restrictive sulfur-sampling requirement. In addition, the final rule amendments to 40 CFR Part 60, Subpart GG was not intended to impose new requirements for turbines constructed before July 8, 2004.

Section 60.334(h)(4) of the final rule states that “For any turbine constructed.....for which a custom fuel monitoring schedule has previously been approved, may, continue monitoring on this schedule. See Table in Attachment 2 for sulfur analysis. Therefore, Riverside requests not to monitor sulfur content once per month, when operating, but to continue to monitoring sulfur as per the previously approved CFMS.

Division’s response: Comment noted. The permit now states, “Pursuant to 40 CFR 60.334(h)(4), for which a custom fuel monitoring schedule has been approved, the owner or operator may continue monitoring on this schedule. Therefore, according to the current custom monitoring schedule, the sulfur content of the fuel shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.”

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.